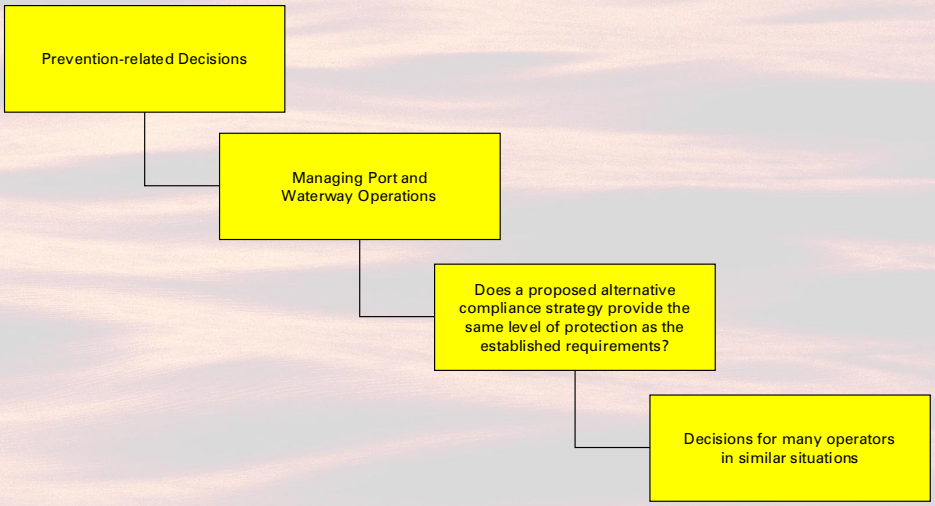
Requiring Stability Tests on Small Passenger Vessels

Risks of Instability in Small Passenger Vessels

Many small passenger vessels travel ocean routes, but have never had a stability test. Clearly, detecting unknown stability deficiencies on such vessels would lessen the possibility of accidents. A job aid was needed to evaluate whether the benefit of conducting a stability test would outweigh the cost of conducting the stability test.

RBDM Decision Structure Hierarchy



RBDM Guidelines

The use of this tool was consistent with the guidance in Volume 3, Chapter 5 of the *RBDM Guidelines*.

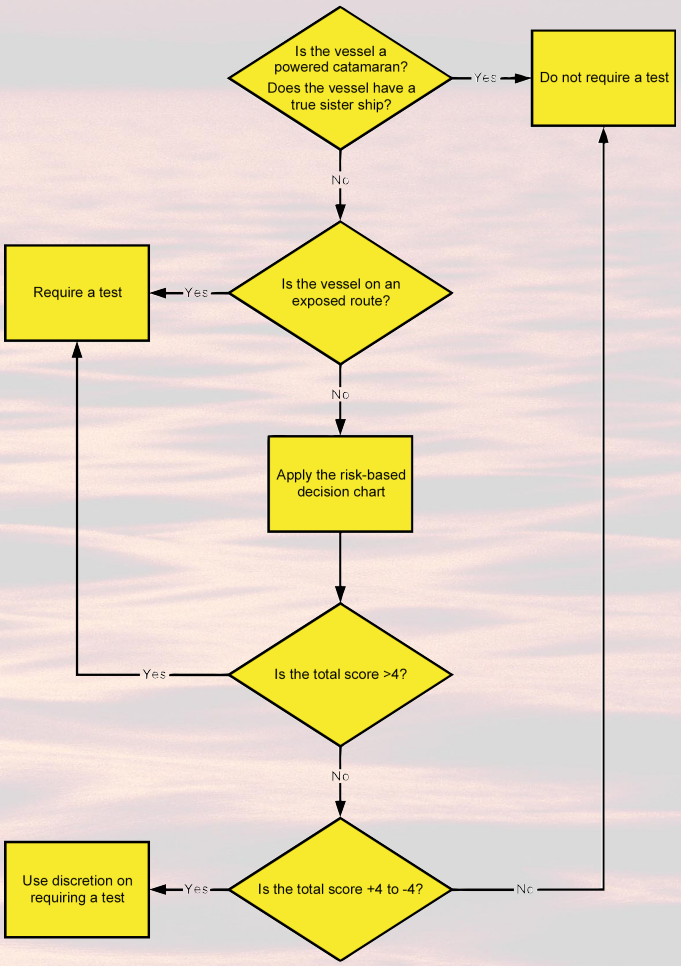
Relative Ranking/Risk Indexing Job Aid

The job aid needed to "screen out" entire classes of vessels, not just single craft. It also needed to be simple, consistent, and adaptable. A flowchart and scoring table were developed.

Results

The job aid application results are consistent with conclusions derived using previous methods to evaluate whether a stability test should be required for smaller vessels. However, more tests are needed to determine whether it is a significant improvement over traditional evaluations.

Flowchart



Example: A Section of a Scoring Table

Risk-based Job Aid for Requiring a Simplified Stability Test on Small Passenger Vessels				
Part II – Scoring Chart				
Vessel Name:				
O.N.:			Date:	
Factor	Subfactors	Scoring Scheme		Vessel Score
		Category (Benchmark)	Weighted Score	
Route	▶ Exposed ▶ Partially protected • 3 miles from shore — 20 miles from harbor of safe refuge • < 3 miles from shore • < 1,000 feet from shore ▶ Protected • < 1,000 feet from shore • Rivers • Shallow water *Note: If the vessel is on an exposed route, then require a test*	Significant increase (3 miles from shore — 20 miles from harbor of safe refuge)	8	
		Moderate increase (< 3 miles from shore)	4	
		Neutral	0	
		Moderate decrease	-4	
		Significant decrease (protected shallow water < 1,000 feet from shore)	-8	